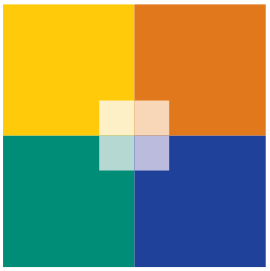
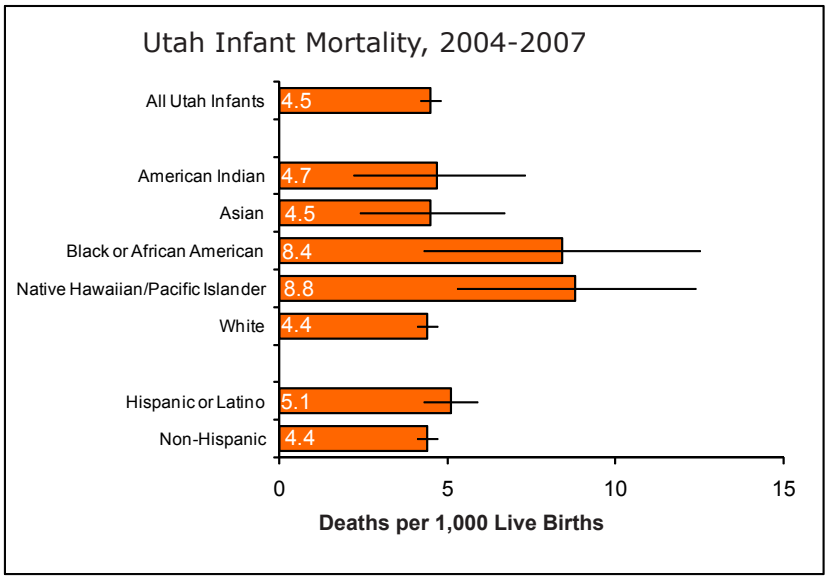
HEALTH OF MOTHERS AND INFANTS



Infant Mortality

Why Is It Important?

The infant death rate is an important measure of a nation's health and a worldwide indicator of health status and social well being. More personally, each death is an individual tragedy for parents, siblings, and other family members.[56]



How Are We Doing?

- From 2004-2007, 4.5 per 1,000 of all Utah babies born died prior to their first birthday.
- The Utah infant mortality rate is lower than the U.S. infant mortality rate, but higher than the infant mortality rates of several other countries, including Singapore, Sweden, Japan, Hong Kong, Iceland, France, and Finland.[56,57]
- Native Hawaiian/Pacific Islander Utah infants had a significantly higher rate of infant death than all Utah infants.
- Three causes account for more than half of all Utah infant deaths: birth defects; Sudden Infant Death Syndrome (SIDS); and conditions in the perinatal period, which include disorders of short gestation. These can reflect maternal health and the quality and accessibility of health care for pregnant women.[56]

How Can We Improve?

Not smoking or drinking alcohol during pregnancy can reduce risk for infant mortality.[56] SIDS risk is reduced by putting babies to sleep on their backs.[58] The UDOH, Maternal and Infant Health Program is currently: reviewing data obtained from the Pregnancy Risk Assessment Monitoring System (PRAMS) and the Perinatal Mortality Review Program (PMRP) to identify modifiable risk factors for infant mortality and develop appropriate interventions; making health information available online to increase awareness of factors associated with infant death; educating prenatal health care providers to help pregnant clients quit smoking; promoting preconception and interconception health care for all women of childbearing age, with special emphasis on attaining and maintaining a healthy weight; and disseminating information on 17P, a newer drug to help prevent recurrent preterm birth. The UDOH, Baby Your Baby program offers information about preparing for pregnancy and having a healthy pregnancy at www.babyyourbaby.org and 1-800-826-9662. The UDOH, WIC (Women, Infants and Children) Program offers nutrition support to pregnant women who meet household income guidelines. Information about these guidelines can be found at http://health.utah.gov/wic/apply.html.

Utah Infant Mortality, 2004-2007

Race/Ethnicity	Average Annual # Infant Deaths	Average Annual Live Births	Crude Rate/1,000 Live Births *(95% CI Range)*	Sig.*
All Utah Infants	238	52,677	4.5 (*4.2- 4.8*)	n/a
American Indian/Alaska Native	3	688	4.7 (*2.2- 7.3*)	
Asian	4	935	4.5 (*2.4- 6.7*)	
Black or African American	4	475	8.4 (*4.3- 12.5*)	
Native Hawaiian/Pacific Islander	6	679	8.8 (*5.3- 12.4*)	↑
White	218	49,321	4.4 (*4.1- 4.7*)	
Hispanic or Latino	41	8,021	5.1 (*4.3- 5.9*)	
Non-Hispanic	195	44,394	4.4 (*4.1- 4.7*)	

Source: Utah Birth Certificate Database

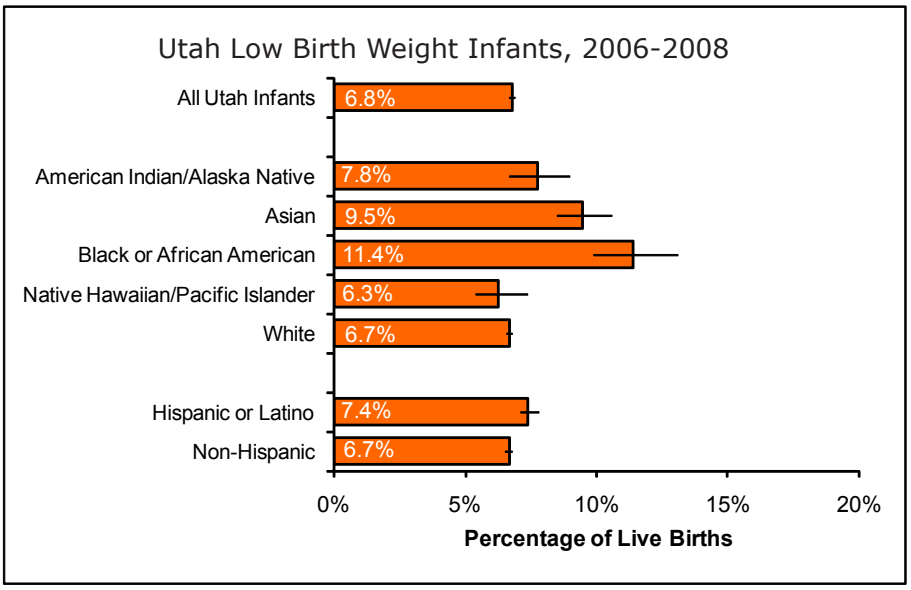
*The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Note: The race/ethnicity data reported here use a linked birth/death file and may underestimate the race-specific infant mortality rate.

Low Birth Weight

Why Is It Important?

Low birth weight increases the risk for infant mortality and morbidity. As birth weight decreases, the risk for death increases. Low birth weight infants who survive often require intensive care at birth, may develop chronic illnesses, and later may require special education services. Health care costs and length of hospital stay are higher for low birth weight infants.[59] Low birth weight infants are those weighing less than 2,500 grams (about 5.5 pounds).



How Are We Doing?

- From 2006-2008, 6.8% of all Utah live births were low birth weight babies.
- The Utah low birth weight rate is lower than the U.S. low birth weight rate.[59]
- Babies born to Asian, Black/African American and Hispanic/Latina mothers had significantly higher rates of low birth weight than all Utah infants.
- As in Utah, the U.S. Black/African American low birth weight rate is much higher than the overall low birth weight rate.[60]

How Can We Improve?

Risk for having low birth weight babies is reduced by managing chronic diseases, maintaining a healthy weight prior to pregnancy, getting early and adequate prenatal care, avoiding alcohol and tobacco during pregnancy, and adequately spacing subsequent pregnancies.[59] The UDOH, Maternal and Infant Health Program encourages preconception care to assist women in achieving optimal pregnancy spacing and attaining healthy pre-pregnancy weight. The UDOH, Baby Your Baby program offers information about preparing for pregnancy and having a healthy pregnancy at www.babyyourbaby.org and 1-800-826-9662. The UDOH, WIC (Women, Infants and Children) Program offers nutrition support to pregnant women who meet household income guidelines. Information about these guidelines can be found at health.utah.gov/wic/apply.html. The UDOH, Tobacco Prevention and Control Program and UDOH, Medicaid offer services to help pregnant women quit smoking.

Percentage of Live Born Infants With Low Birth Weight, Utah, 2006-2008

Race/Ethnicity	Average Annual # LBW	Average Annual Live Births	Crude Rate *(95% CI Range)*	Sig.*
All Utah Infants	3,721	54,714	6.8% *(6.7%- 6.9%)*	n/a
American Indian/Alaska Native	56	723	7.8% *(6.7%- 9.0%)*	
Asian	94	994	9.5% *(8.5%- 10.6%)*	↑
Black or African American	62	541	11.4% *(9.9%- 13.1%)*	↑
Native Hawaiian/Pacific Islander	47	752	6.3% *(5.4%- 7.4%)*	
White	3,404	51,003	6.7% *(6.6%- 6.8%)*	
Hispanic or Latino	664	8,933	7.4% *(7.1%- 7.8%)*	↑
Non-Hispanic	3,030	45,495	6.7% *(6.5%- 6.8%)*	

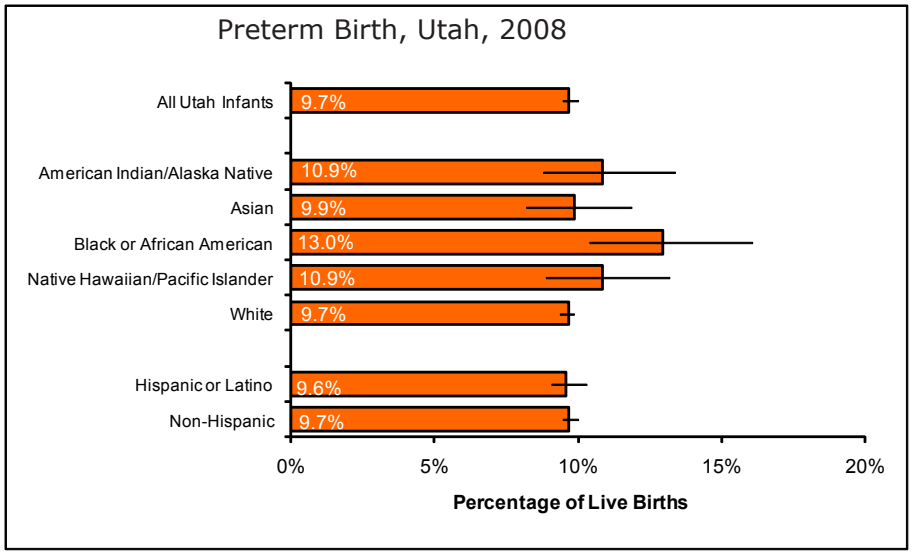
Source: Utah Birth Certificate Database

*The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Preterm Birth

Why Is It Important?

Preterm birth is the leading cause of perinatal death in otherwise normal newborns. Babies born preterm also have increased risks for long term morbidities and often require intensive care after birth. Average hospital stays for preterm infants without complications are three times longer than for a term infant, and for a preterm birth with complications, hospital stays are more than eight times longer.[61] Preterm birth infants are those born at less than 37 weeks gestation.



How Are We Doing?

- In 2008, 9.7% of all Utah live births were preterm.
- The Utah preterm birth rate is lower than the U.S. preterm birth rate.[61]
- Babies born to Black/African American mothers had significantly higher rates of preterm birth than all Utahns.

How Can We Improve?

Risk for having preterm babies can be reduced by maintaining a healthy weight prior to pregnancy, getting early and adequate prenatal care, avoiding alcohol and tobacco during pregnancy, staying current on immunizations, and adequately spacing subsequent pregnancies. Pregnant women who have had a previous spontaneous preterm birth, particularly in the immediately preceding pregnancy, should be offered a progesterone supplement beginning at 16-20 weeks gestation.[61] The UDOH, Maternal and Infant Health Program encourages preconception care to assist women in achieving optimal pregnancy spacing and attaining healthy pre-pregnancy weight. The UDOH, Baby Your Baby program offers information about preparing for pregnancy and having a healthy pregnancy at www.babyyourbaby.org and 1-800-826-9662. The UDOH, WIC (Women, Infants and Children) Program offers nutrition support to pregnant women who meet household income guidelines. Information about these guidelines can be found at health.utah.gov/wic/apply.html.

Percentage of Live Infants Born at Less Than 37 Weeks Gestation, Utah, 2008

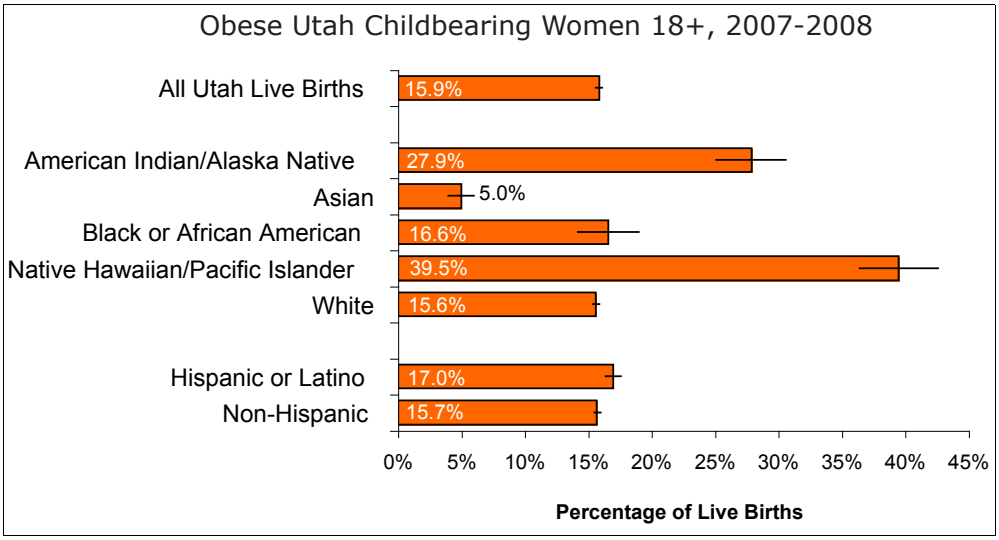
Race/Ethnicity	# Preterm	Total Live Births	Crude Rate *(95% CI Range)*	Sig.*
All Utah Infants	5,401	55,605	9.7% (*9.5%- 10.0%*)	n/a
American Indian/Alaska Native	80	735	10.9% (*8.8%- 13.4%*)	
Asian	104	1,054	9.9% (*8.2%- 11.9%*)	
Black or African American	74	570	13.0% (*10.4%- 16.1%*)	↑
Native Hawaiian/Pacific Islander	90	828	10.9% (*8.9%- 13.2%*)	
White	4,979	51,573	9.7% (*9.4%- 9.9%*)	
Hispanic or Latino	915	9,493	9.6% (*9.1%- 10.3%*)	
Non-Hispanic	4,456	45,761	9.7% (*9.5%- 10.0%*)	

Source: Utah Birth Certificate Database

*The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Obesity in Pregnancy

Why Is It Important?
Women who are not at a healthy weight prior to pregnancy are at increased risk of poor outcomes, such as preterm birth.[61,62] Women who are obese prior to pregnancy have longer hospital stays and higher utilization of medical care during pregnancy.[62] Obesity is defined as having a body mass index (BMI) of 30.0 or greater prior to pregnancy.



How Are We Doing?

- From 2007-2008, 15.9% of Utah childbearing women over 18 years-old were obese prior to pregnancy.
- The percentage of adult women with an obese pre-pregnancy BMI increased by more than 60% from 1993 to 2008.[62] The overall Utah adult obesity rate, including men and non-childbearing women, also increased steadily over the same time period.[36]
- American Indian/Alaska Native, Native Hawaiian/Pacific Islander and Hispanic/Latina Utah mothers had significantly higher rates of obesity in pregnancy than all Utahns.
- Asian Utah mothers had significantly lower rates of obesity in pregnancy than all Utahns.

How Can We Improve?
Obese persons should lose about 1 to 2 pounds each week, up to 10% of initial body weight over six months, through healthy eating and physical activity. Faster weight loss does not achieve better long-term results.89 In 2008, the U.S. Centers for Disease Control and Prevention began funding the UDOH, Physical Activity, Nutrition, and Obesity (PANO) program to promote behaviors that contribute to healthy weight: physical activity, fruit and vegetable consumption and breastfeeding; and discourage excessive TV viewing and consumption of sugary beverages and high-energy-dense foods (high in fat or low in water). The UDOH, Maternal and Infant Health Program encourages preconception care to assist women in attaining healthy pre-pregnancy weight, as well as prenatal care throughout pregnancy. The UDOH, WIC (Women, Infants and Children) Program offers nutrition support to pregnant women who meet household income guidelines. Information about these guidelines can be found at health.utah.gov/wic/apply.html.

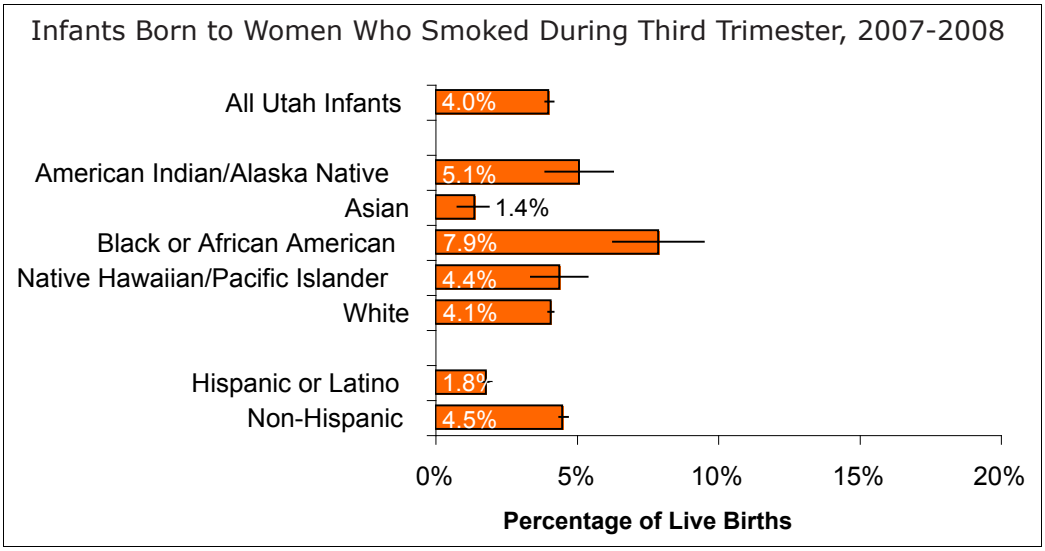
Percentage of Live Births to Utah Women Age 18+ Who Were Obese in Pregnancy, 2007-2008

Race/Ethnicity	Average Annual # Obese	Average Annual Live Births	*Crude Rate (95% CI Range)*	Sig.*
All Utah Live Births	8,596	54,177	15.9% (*15.6%- 16.1%*)	n/a
American Indian/Alaska Native	192	688	27.9% (*25.1%- 30.6%*)	↑
Asian	50	982	5.0% (*4.0%- 6.0%*)	↓
Black or African American	91	545	16.6% (*14.2%- 19.0%*)	
Native Hawaiian/Pacific Islander	304	770	39.5% (*36.4%- 42.6%*)	↑
White	7,882	50,430	15.6% (*15.4%- 15.9%*)	
Hispanic or Latino	1,479	8,713	17.0% (*16.4%- 17.6%*)	↑
Non-Hispanic	7,107	45,180	15.7% (*15.5%- 16.0%*)	

Source: Utah Birth Certificate Database
*The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Smoking During Pregnancy

Why Is It Important?
Cigarette smoking during pregnancy increases the risk for premature rupture of membranes; abruption placentae; placenta previa; preterm birth, stillbirth; low birth weight; neonatal mortality; and Sudden Infant Death Syndrome.[42]



How Are We Doing?

- From 2007-2008, 4.0% of all Utah childbearing women smoked during the third trimester of pregnancy.
- Black/African American mothers had a significantly higher rate of smoking during the third trimester of pregnancy than all Utahns.
- Asian and Hispanic/Latina Utah mothers had significantly lower rates of smoking during the third trimester of pregnancy than all Utahns.
- These data may underestimate smoking during pregnancy because of nondisclosure on birth certificates. An anonymous Utah survey, the Pregnancy Risk Assessment Monitoring System, found higher rates of smoking during pregnancy than the birth certificate database at the same time periods.[63] Birth certificate data are used in this report because birth certificates have a larger number of minority records for analysis by race and ethnicity.

How Can We Improve?
Quitting smoking before or early in pregnancy reduces risk of poor birth outcomes. Birth weight decreases as the number of cigarettes smoked increases, so smoking cessation by the third trimester of pregnancy can eliminate much of the risk for low birth weight.[63] National guidelines explain how health care providers can improve smoking cessation during pregnancy.[64] The UDOH, Tobacco Prevention and Control Program (TPCP) funds statewide and local tobacco-use cessation services, including the Utah Tobacco Quit Line (1-888-567-TRUTH), the Spanish Utah Tobacco Quit Line (1-877-629-1585), a web-based cessation service (www.utahquitnet.com), and school and community-based programs for pregnant women. UDOH, Medicaid covers nicotine replacement therapy and contacts pregnant tobacco users every six weeks throughout pregnancy for cessation support. The Utah Department of Workforce Services screens all pregnant Medicaid applicants for tobacco use at the time of enrollment. The UDOH, Pregnancy Risk Line, 1-800-822-BABY (2229), answers questions about environmental exposures such as tobacco smoke that can potentially harm an embryo, fetus, or infant.

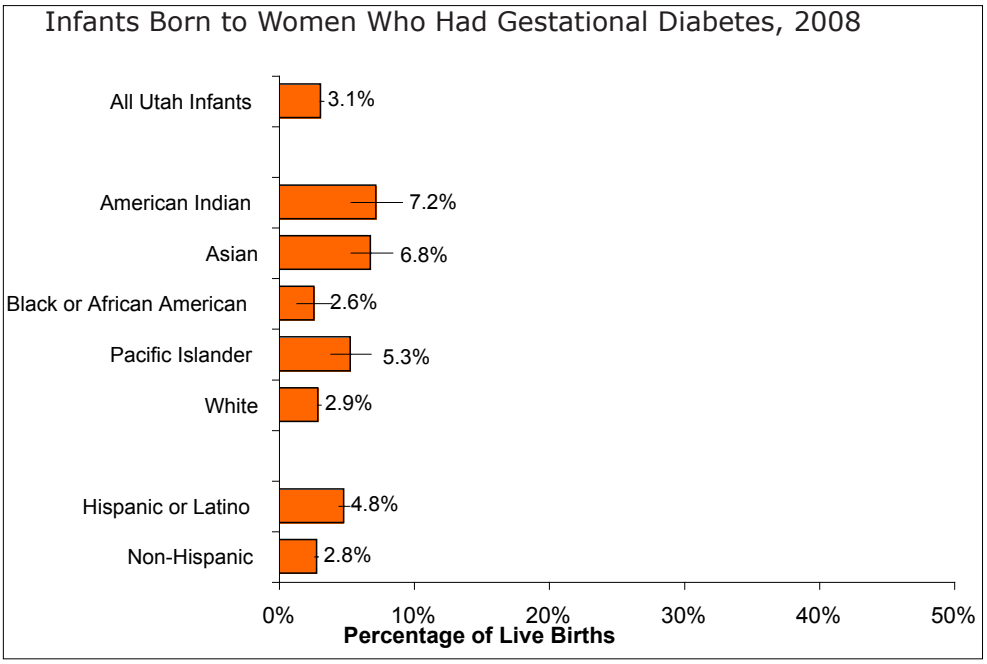
Percentage of Infants Born to Women Who Smoked During the Third Trimester of Pregnancy, 2007-2008

Race/Ethnicity	Average Annual # Born to Smokers	Average Annual Live Births	*Crude Rate (95% CI Range)*	Sig.*
All Utah Infants	2,237	55,334	4.0% (*3.9%- 4.2%*)	n/a
American Indian/Alaska Native	37	726	5.1% (*3.9%- 6.3%*)	
Asian	14	992	1.4% (*0.8%- 1.9%*)	↓
Black or African American	45	569	7.9% (*6.3%- 9.5%*)	↑
Native Hawaiian/Pacific Islander	35	783	4.4% (*3.4%- 5.4%*)	
White	2,102	51,477	4.1% (*4.0%- 4.2%*)	
Hispanic or Latino	166	9,281	1.8% (*1.6%- 2.0%*)	↓
Non-Hispanic	2,068	45,759	4.5% (*4.4%- 4.7%*)	↑

Source: Utah Birth Certificate Database

Gestational Diabetes

Why Is It Important?
Gestational diabetes refers to insulin resistance or carbohydrate intolerance that is first identified during pregnancy and usually disappears after delivery. Gestational diabetes increases the risk for pregnancy-induced hypertension, C-section delivery, and preterm birth. Women who have had gestational diabetes are at increased risk for developing type 2 diabetes. Their infants are at increased risk for birth complications and diabetes.[65,66]



How Are We Doing?
- In 2008, 3.1% of all Utah births were affected by gestational diabetes.
- The Utah gestational diabetes rate has risen steadily over the past decade.[65]
- American Indian/Alaska Native, Asian, Native Hawaiian/Pacific Islander and Hispanic/Latina Utah infants had significantly higher rates of gestational diabetes than all Utahns.

How Can We Improve?
Having a healthy pre-pregnancy weight reduces the risk for gestational diabetes.[65] The UDOH, Diabetes Prevention and Control Program (DPCP) Practice Recommendations recommend that most pregnant women be screened for gestational diabetes between the 24th and 28th weeks of pregnancy.[66] Early identification of gestational diabetes may reduce the risk of adverse birth outcomes and increase the likelihood that glucose levels might be managed through diet and exercise, without medications.[65] Women who are diagnosed with gestational diabetes should have their blood sugar level tested at their postpartum checkup to ensure that it has returned to normal. Women who had gestational diabetes can reduce their risk for developing type 2 diabetes by making lifestyle changes such as healthy eating, regular physical activity, and maintaining a healthy weight. The UDOH, Maternal and Infant Health Program encourages good preconception health to help women reduce their risk of gestational diabetes and contacts women who had gestational diabetes to encourage them to have their blood sugar levels tested at their postpartum checkup.

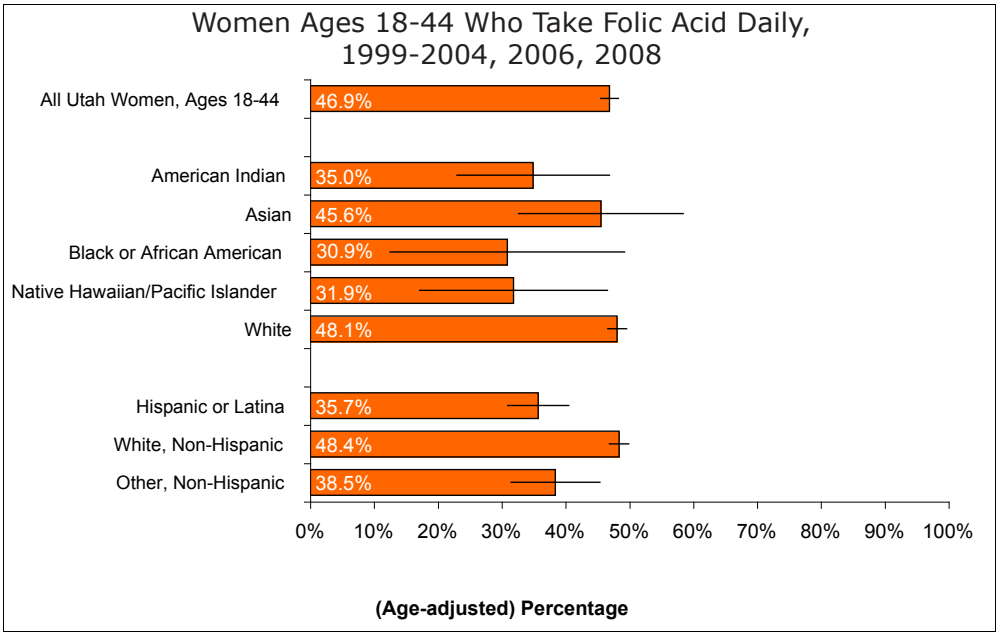
Percentage of Live Born Infants Born to Mothers Who Had Gestational Diabetes Mellitis (GDM), Utah, 2008

Race/Ethnicity	# Born to Mothers with GDM	Total Live Births	Crude Rate *(95% CI Range)*	Sig.*
All Utah Infants	1,734	55,605	3.1% (*3.0%- 3.3%*)	n/a
American Indian/Alaska Native	53	735	7.2% (*5.3%- 9.1%*)	↑
Asian	72	1,054	6.8% (*5.3%- 8.4%*)	↑
Black or African American	15	570	2.6% (*1.3%- 3.9%*)	
Native Hawaiian/Pacific Islander	44	828	5.3% (*3.8%- 6.8%*)	↑
White	1,510	51,593	2.9% (*2.8%- 3.1%*)	
Hispanic or Latino	455	9,493	4.8% (*4.4%- 5.2%*)	↑
Non-Hispanic or Latino	1,279	46,112	2.8% (*2.6%- 2.9%*)	

Source: Utah Birth Certificate Database
*The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Folic Acid Consumption, Women Ages 18-44

Why Is It Important?
Consuming a multivitamin with folic acid daily from at least one month before conception through the first months of pregnancy can prevent most neural tube defects, such as anencephaly and spina bifida.



How Are We Doing?

- From 1999-2004, 2006 and 2008, 46.9% of Utah women ages 18-44 reported taking folic acid (age-adjusted rate).
- Native Hawaiian/Pacific Islander and Hispanic/ Latina Utah women ages 18-44 had significantly lower age-adjusted rates of folic acid consumption than all Utah women in this age group.
- Hispanic/Latino Utah infants had a significantly higher rate of neural tube defects (10.3/10,000 births) than all Utah infants (7.7/10,000 births). (Utah Birth Defect Network, 1994-2008)
- From 2004-2008, about one-third of Utah births resulted from unintended pregnancies, demonstrating the need for women of childbearing age to take folic acid even when they are not planning a pregnancy.

(See page 54)

How Can We Improve?
All women of childbearing age should take a daily supplement containing 400 micrograms of folic acid.[68] Taking folic acid after a woman learns she is pregnant is too late to prevent a neural tube defect. The UDOH, Utah Birth Defect Network has implemented a federally funded folic acid educational program targeting WIC (Women, Infants and Children) clients to increase consumption.

Percentage of Utah Women Age 18-44 Who Reported Taking Folic Acid Daily, 1999-2004, 2006, 2008

Race/Ethnicity	Sample Size	Total Female Population Ages 18-44	Number Taking Folic Acid	Crude Rate *(95% CI Range)*	Age-adjusted Rate* *(95% CI Range)*	Sig.**
All Utah Women 18-44	8,815	531,447	249,242	46.2% *(44.8%- 47.6%)*	46.9% *(45.5%- 48.3%)*	n/a
American Indian/Alaska Native	123	8,108	2,834	34.7% *(22.9%- 46.4%)*	35.0% *(23.0%- 46.9%)*	
Asian	90	14,460	6,591	44.9% *(31.1%- 58.8%)*	45.6% *(32.7%- 58.5%)*	
Black or African American	37	6,217	1,921	35.6% *(11.0%- 60.2%)*	30.9% *(12.5%- 49.3%)*	
Native Hawaiian/Pacific Islander	51	4,377	1,396	31.8% *(17.1%- 46.5%)*	31.9% *(17.2%- 46.6%)*	↓
White	8,066	498,284	239,702	47.3% *(45.8%- 48.8%)*	48.1% *(46.6%- 49.6%)*	
Hispanic or Latina	684	60,571	21,652	34.6% *(29.8%- 39.4%)*	35.7% *(31.0%- 40.5%)*	↓
White, Non-Hispanic	7,757	440,861	213,524	47.7% *(46.2%- 49.2%)*	48.4% *(46.9%- 49.9%)*	
Other, Non-Hispanic	335	30,015	11,542	39.0% *(31.7%- 46.3%)*	38.5% *(31.5%- 45.4%)*	↓

Source: Behavioral Risk Factor Surveillance System. Population Estimates: UDOH Office of Public Health Assessment. Estimates are for 2006 year.

*Age-adjusted to the U.S. 2000 standard population

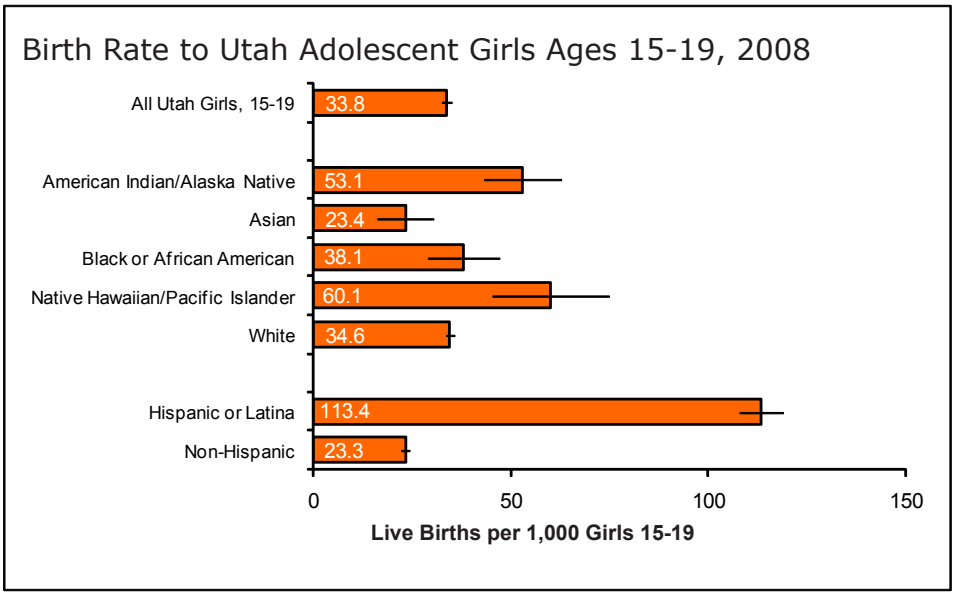
** The age-adjusted rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Contact: UDOH Utah Birth Defect Network, 801-883-4661, http://health.utah.gov/birthdefect/

Births to Adolescents

Why Is It Important?

Compared to babies born to older mothers, babies born to adolescent mothers are at higher risk of low birth weight and infant mortality. These babies are more likely to grow up in homes that offer lower levels of emotional support and cognitive stimulation and are less likely to earn a high school diploma. For the mothers, giving birth during adolescence is associated with limited educational attainment, which in turn can reduce future employment prospects and earning potential.[69]



How Are We Doing?

- In 2008, the rate of Utah girls age 15 to 19 who gave birth was 33.8 per 1,000.
- American/Indian Alaska Native, Native Hawaiian/Pacific Islander, and Hispanic/Latina girls had significantly higher rates of births to adolescents than all Utah girls.
- As in Utah, the U.S. Hispanic/Latina rate of births to adolescents is much higher than the overall rate of births to adolescents.[70]
- These rates include only live births that resulted from an adolescent pregnancy; the rates might be higher if miscarriages, abortions, and stillbirths were included.

How Can We Improve?

Teen pregnancy prevention programs with the strongest evidence of success are those that encourage abstinence as the safest choice for teens and also encourage those who do have sex to use contraception.[71] The Adolescent Health Network (AHN) is currently focusing on adolescent reproductive health, including teen pregnancy and sexually transmitted disease prevention. The UDOH, Maternal and Infant Health Program and its partners in AHN completed a comprehensive report about these topics in January 2010, which will guide future prevention efforts. The AHN developed, implemented, and evaluated "Parents Matter," an evidence-based parent intervention designed to promote positive parenting and effective parent-child communication about sexuality and sexual risk reduction for parents of 9-12 year-olds. The AHN was awarded a $15,000 grant from the CDC to pilot the Spanish language version of this program. The Parents Matter program will continue to be provided based on the availability of funds.

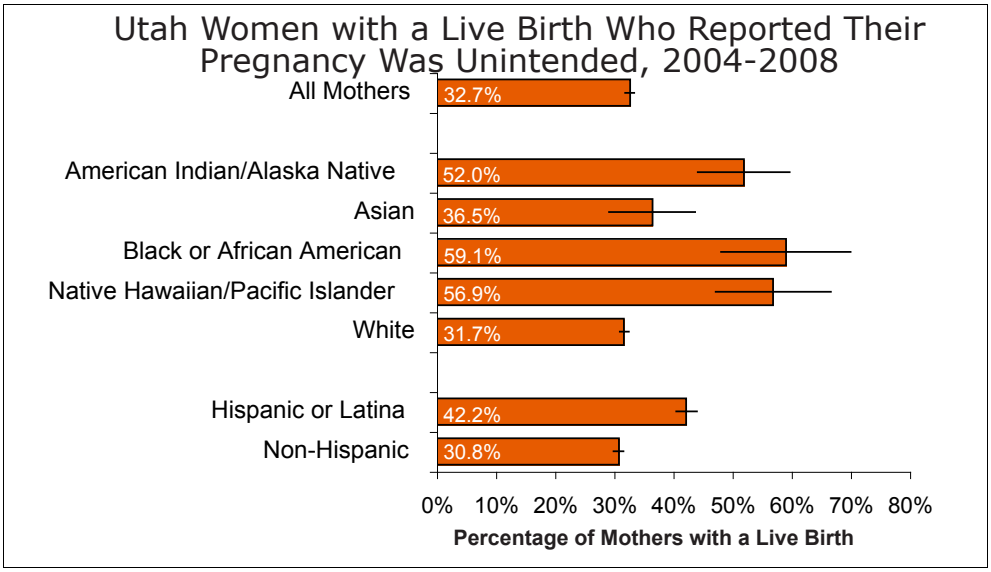
Birth Rate to Adolescent Girls Age 15-19, per 1,000 Girls, Utah, 2008

Race/Ethnicity	# Teen Births	# Girls 15-19	Crude Rate/1,000 Girls *(95% CI Range)*	Sig.*
All Utah Girls, 15-19	3,690	106,960	33.8 (*32.7- 34.9*)	n/a
American Indian/Alaska Native	107	2,015	53.1 (*43.3- 62.9*)	↑
Asian	41	1,750	23.4 (*16.3- 30.5*)	↓
Black or African American	65	1,708	38.1 (*29.0- 47.1*)	
Native Hawaiian/Pacific Islander	60	999	60.1 (*45.3- 74.8*)	↑
White	3,392	98,042	34.6 (*33.5- 35.7*)	
Hispanic or Latina	1,424	12,563	113.4 (*107.8- 118.9*)	↑
Non-Hispanic	2,287	94,397	23.3 (*22.4- 24.2*)	↓

Source: Utah Birth Certificate Database. Population Estimates: UDOH Office of Public Health Assessment.
*The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Unintended Pregnancy

Why Is It Important?
Women whose pregnancies are unintended are less likely to obtain early prenatal care, consume folic acid to prevent neural tube defects, and avoid substances that could harm the fetus than women with planned pregnancies.[72] Unintended pregnancy includes births that women reported as wanting later or not at any time in the future.



How Are We Doing?

- From 2004-2008, 32.7% of Utah childbearing women reported that their pregnancies were unintended.
- American Indian/Alaska Native, Black/African American, Native Hawaiian/Pacific Islander and Hispanic/Latina Utahns had significantly higher rates of unintended pregnancy than all Utahns.
- These rates include only live births that resulted from an unintended pregnancy; the rates might be higher if miscarriages, abortions, and stillbirths were included.

How Can We Improve?
Women should discuss contraception options, emergency contraception, and correct use of contraception with their health care providers. There are a number of clinics throughout the state which provide family planning services on a "sliding fee scale," based upon income and family size. Natural family planning methods also exist for couples who prefer not to use contraceptive drugs or devices. The UDOH, Maternal and Infant Health Program provides information about contraception, natural family planning, and family planning services in Utah.

Percentage of Utah Women with a Live Birth Who Reported Their Pregnancy Was Unintended, 2004-2008

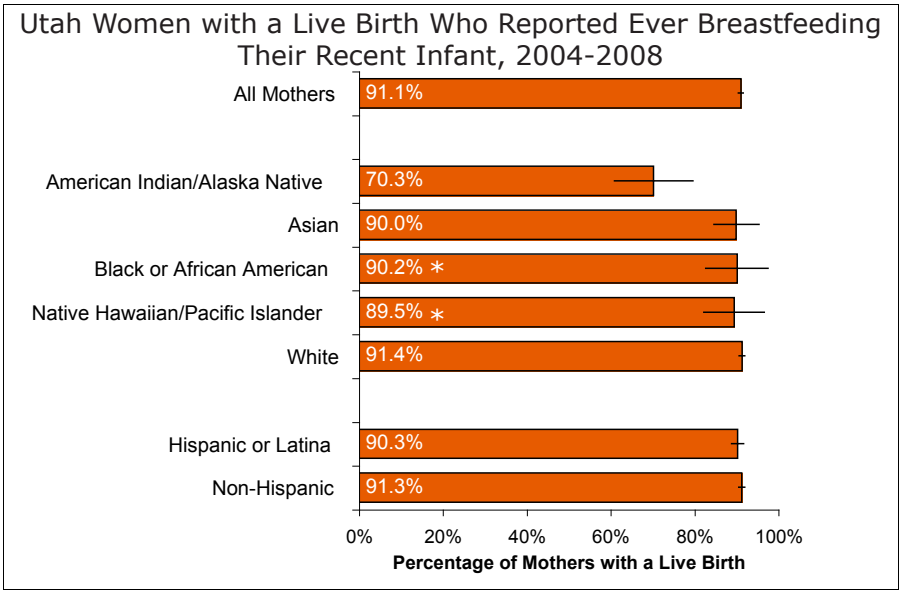
Race/Ethnicity	Sample Size	Average Annual Live Births	Estimated Annual# Unintended	Crude Rate *(95% CI Range)*	Sig.*
All Utah Women with a Live Birth	9,374	51,635	16,868	32.7% (*31.6%- 33.7%*)	n/a
American Indian/Alaska Native	117	562	292	52.0% (*41.9%- 62.1%*)	↑
Asian	150	860	314	36.5% (*27.6%- 45.5%*)	
Black or African American	68	311	184	59.1% (*45.4%- 72.7%*)	↑
Native Hawaiian/Pacific Islander	98	553	315	56.9% (*46.0%- 67.9%*)	↑
White	8,795	48,830	15,494	31.7% (*30.7%- 32.8%*)	
Hispanic or Latina	1,983	7,978	3,367	42.2% (*39.7%- 44.7%*)	↑
Non-Hispanic	7,315	43,657	13,375	30.8% (*29.6%- 32.0%*)	↓

Source: Pregnancy Risk Assessment Monitoring System. Average Annual Live Births Data: Utah Birth Certificate Database.
*The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Ever Breastfeeding

Why Is It Important?

Breastfeeding is one of the most important contributors to infant health, benefitting the infant's growth, immunity, and development. Breastfeeding improves maternal health and contributes economic benefits to the family, health care system, and workplace.[73] For the first few days of an infant's life, a mother produces colostrum, which protects the infant against infection and disease and reduces risk of jaundice.[74]



How Are We Doing?

- From 2004-2008, 91.1% of Utah women with a live birth reported that they ever breastfed their most recent infant.
- American Indian/Alaska Native Utah women had a significantly lower rate of ever breastfeeding than all Utahns.

How Can We Improve?

The American Academy of Pediatrics recommends exclusive breastfeeding for approximately the first six months of a baby's life and continued breastfeeding for at least the first year.[75] Babies should be breastfed for the first time within the first hour of their births.[76] Mothers should breastfeed whenever their baby shows signs of hunger, such as searching for the breast, making sucking noises, or sucking on their fists. The more a woman breastfeeds, the more milk she will make.[74] Lactation consultants can help mothers learn how to breastfeed effectively and comfortably. The UDOH, WIC (Women, Infants and Children) Program offers lactation consultation and pumps and other equipment to support breastfeeding to women who meet household income guidelines. Information about these guidelines can be found at health.utah.gov/wic/apply.html. Breastfeeding mothers in WIC may stay in the WIC program longer than non-breastfeeding mothers and receive an enhanced food package. The UDOH, Baby Your Baby program offers information about breastfeeding at www.babyyourbaby.org and 1-800-826-9662. The Utah Breastfeeding Coalition promotes workplace, health care and public policies that foster a positive environment for breastfeeding. The UDOH, Pregnancy Risk Line, 1-800-822-BABY (2229) is a free, confidential telephone information service answering questions about medicines, drugs, chemicals, and other environmental exposures that can potentially harm an infant.

Percentage of Utah Women with a Live Birth Who Reported Ever Breastfeeding Their Most Recent Infant, 2004-2008

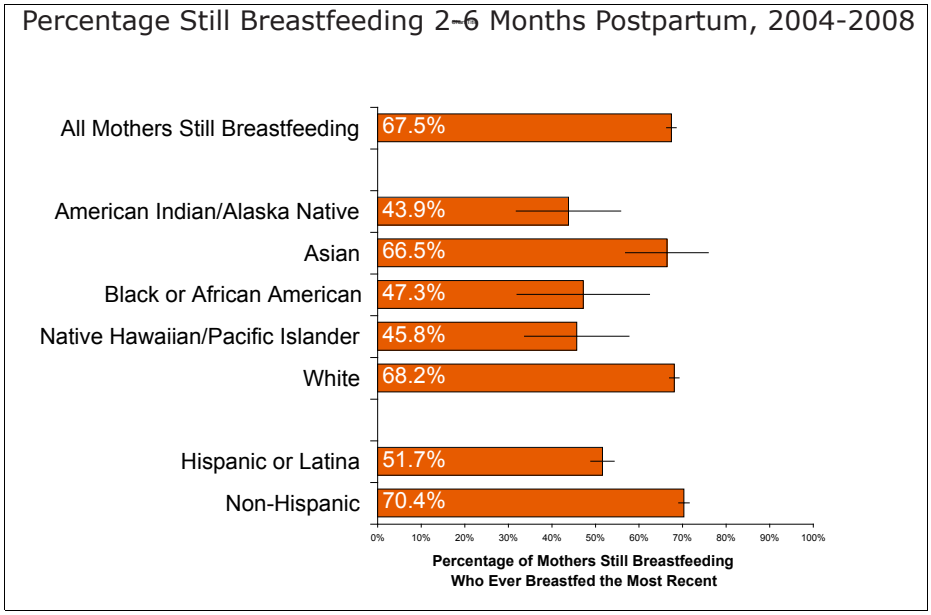
Race/Ethnicity	Sample Size	Avg Annual # Women w/ a Live Birth	Estimated Annual # Ever Breast-feeding	Crude Rate *(95% CI Range)*	Sig.**
All Utah Women with a Live Birth	9,160	50,931	46,414	91.1% (*90.5%- 91.7%*)	n/a
American Indian/Alaska Native	117	559	393	70.3% (*60.9%- 79.6%*)	↓
Asian	142	835	751	90.0% (*84.6%- 95.3%*)	
Black or African American	65	304	274*	90.2%* (*82.8%- 97.7%*)	
Native Hawaiian/Pacific Islander	92	533	477*	89.5%* (*82.3%- 96.7%*)	
White	8,602	48,202	44,080	91.4% (*90.8%- 92.1%*)	
Hispanic or Latina	1,943	7,872	7,106	90.3% (*88.8%- 91.7%*)	
Non-Hispanic	7,142	42,830	39,104	91.3% (*90.6%- 92.0%*)	

Source: Pregnancy Risk Assessment Monitoring System. Average Annual Live Births Data: Utah Birth Certificate Database.

*Use caution in interpreting, the estimate has a relative standard error greater than 30% and does not meet UDOH standards for reliability.
**The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Still Breastfeeding 2-6 Months Postpartum

Why Is It Important?
Breastfeeding is one of the most important contributors to infant health. It also provides economic and health benefits for the mother.[73] Babies who are exclusively breastfed until six months old are less likely to develop ear infections, diarrhea, and respiratory illnesses. They may also be less likely to develop childhood obesity.[76]



How Are We Doing?

- From 2004-2008, 67.5% of Utah childbearing women who had ever breastfed their most recent infant reported that they had were still breastfeeding at the time of survey, two-six months postpartum.
- American Indian/Alaska Native, Black/African American, Native Hawaiian/Pacific Islander and Hispanic/Latina Utahns had significantly lower rates of continuing breastfeeding than all Utah breastfeeding women.
- American Indian/Alaska Native Utahns also had a low rate of breastfeeding initiation. Only 35.4% of their infants benefitted from breastfeeding 2-6 months postpartum. (See page 55.)

How Can We Improve?
The American Academy of Pediatrics recommends exclusive breastfeeding for approximately the first six months of a baby's life and continued breastfeeding for at least the first year.[75] Even after returning to work or school, pumping and storing breast milk makes it possible to continue providing breast milk. The UDOH, WIC (Women, Infants and Children) Program offers lactation consultation and pumps and other equipment to support breastfeeding to women who meet household income guidelines. Information about these guidelines can be found at health.utah.gov/ wic/apply.html. Breastfeeding mothers in WIC may stay in the WIC program longer than non-breastfeeding mothers and receive an enhanced food package. The UDOH, Baby Your Baby program offers information about breastfeeding at www.babyyourbaby.org and 1-800-826-9662. The Utah Breastfeeding Coalition promotes workplace, health care and public policies that foster a positive environment for breastfeeding.

Among Utah Women Who Reported Ever Breastfeeding Their Most Recent Infant, Percentage Who Had Stopped Breastfeeding by Time of Survey (2-6 Months Postpartum), 2004-2008

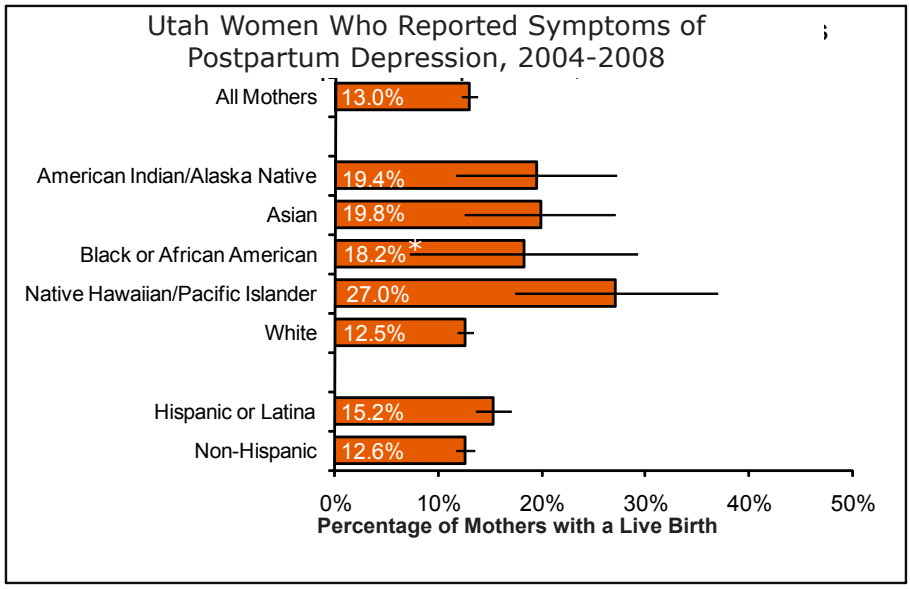
Race/Ethnicity	Sample Size	Avg Annual # of Infants Ever Breastfed	Estimated # Still Breast-feeding	Crude Rate *(95% CI Range)*	Sig.*
All Utah Women with a Live Birth Who Ever Breastfed Their Most Recent Infant	8,155	46,145	31,167	67.5% (*66.5%-68.6%*)	n/a
American Indian/Alaska Native	84	393	173	43.9% (*31.9%-55.9%*)	↓
Asian	124	751	500	66.5% (*57.1%-76.0%*)	
Black or African American	57	273	129	47.3% (*32.1%-62.5%*)	↓
Native Hawaiian/Pacific Islander	83	477	219	45.8% (*33.9%-57.8%*)	↓
White	7,683	43,813	29,893	68.2% (*67.1%-69.3%*)	
Hispanic or Latina	1,731	7,041	3,639	51.7% (*49.0%-54.4%*)	↓
Non-Hispanic	6,357	38,900	27,397	70.4% (*69.2%-71.6%*)	↑

Source: Pregnancy Risk Assessment Monitoring System. Average Annual Live Births Data: Utah Birth Certificate Database.
*The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Postpartum Depression

Why Is It Important?

Postpartum depression is the most common complication related to childbirth.[72] Postpartum depression can affect a woman's health, her relationships with spouse/partner and children and the brain development of her baby and her other children.[77] Postpartum depression is different from the baby blues, which involves mild depressive symptoms shortly after pregnancy. Women who experience postpartum depression tend to experience more severe symptoms which can last much longer.[78]



How Are We Doing?

- From 2004-2008, 13.0% of Utah childbearing women reported symptoms of postpartum depression.
- Native Hawaiian/Pacific Islander and Hispanic/Latina Utahns had significantly higher rates of postpartum depression than all Utah childbearing women.

How Can We Improve?

Signs of postpartum depression may include sadness, fear, anxiety, difficulty making decisions, not taking care of self or family, and feelings about harming self or children. Symptoms can begin any time in the first year after giving birth and will last longer than the first two weeks following childbirth. Effective treatments, such as counseling and medications, are available for postpartum depression. Lifestyle changes, such as asking family or friends to help with childcare and housework, eating nutritious foods, and exercising can also help combat postpartum depression.[78] The UDOH, Baby Your Baby program offers information about postpartum depression at www.babyyourbaby.org and 1-800-826-9662. The UDOH, Pregnancy Risk Line, 1-800-822-BABY (2229), is a free, confidential telephone information service answering questions about medicines, drugs, chemicals, and other environmental exposures that can potentially harm an embryo, fetus, or infant.

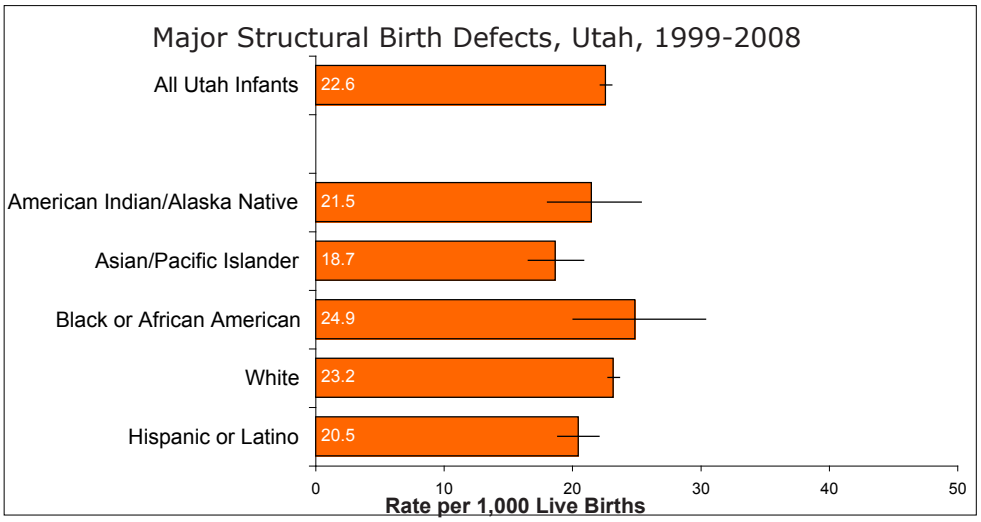
Percentage of Utah Women Who Reported Symptoms of Postpartum Depression (PPDS), 2004-2008

Race/Ethnicity	Sample Size	Average Annual # of Women with a Live Birth	Estimated Annual Number with PPDS	Crude Rate *(95% CI Range)*	Sig.**
All Utah Women with a Live Birth	9,517	52,300	6,789	13.0% (*12.2%- 13.7%*)	n/a
American Indian/Alaska Native	120	577	112	19.4% (*11.6%- 27.1%*)	
Asian	151	870	172	19.8% (*12.5%- 27.0%*)	
Black or African American	69	314	57*	18.2%* (*7.2%- 29.1%*)	
Native Hawaiian/Pacific Islander	102	569	154	27.0% (*17.3%- 36.8%*)	↑
White	8,923	49,433	6,187	12.5% (*11.8%- 13.3%*)	
Hispanic or Latina	2,033	8,147	1,240	15.2% (*13.5%- 17.0%*)	↑
Non-Hispanic	7,405	43,909	5,512	12.6% (*11.7%- 13.4%*)	

Source: Pregnancy Risk Assessment Monitoring System. Average Annual Live Births Data: Utah Birth Certificate Database.
*Use caution in interpreting; the estimate has a relative standard error greater than 30% and does not meet UDOH standards for reliability.
**The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Major Structural Birth Defects

Why Is It Important?
Birth defects are a major cause of stillbirths and infant deaths. Children and adults with birth defects are also at increased risk for chronic illness, disability, and premature death. In Utah and the U.S., birth defects are the leading cause of infant mortality. They contribute to pediatric hospitalizations, chronic childhood illness, and developmental disabilities. Birth defects are a critical public health issue in Utah because it has the highest birth rate in the nation.[81]



How Are We Doing?
- From 1999–2008, the rate of major structural birth defects in Utah was 22.6 per 1,000 births.
- This number is actually lower than the rate for all birth defects because every type of birth defect is not monitored.
- White Utah infants had a significantly higher rate of major structural birth defects than all Utahns.
- Asian/Pacific Islander and Hispanic/Latino Utah infants had significantly lower rates of major structural birth defects than all Utahns.

How Can We Improve?
To reduce the occurrence of birth defects among infants in Utah, primary prevention activities must be targeted at women in their childbearing years who are not yet pregnant. Each year, a new cohort of young women becomes capable of becoming pregnant. Improving one's health before becoming pregnant improves the odds of having a healthy baby. Some known strategies for reducing the risk of birth defects include taking a daily multivitamin with folic acid prior to pregnancy, maintaining a healthy pre-pregnancy weight, eating a healthy diet, and not smoking cigarettes and drinking alcohol. Women planning a pregnancy should consult their obstetric care provider about any medications they may be taking or chronic diseases (e.g., diabetes) they may have. More research is needed to determine how to prevent birth defects. The UDOH, Utah Birth Defect Network (UBDN) tracks all major birth defects to search for causes and promotes birth defect prevention such as using a multivitamin with folic acid before becoming pregnant to prevent spina bifida and other neural tube defects.

Utah Birth Defects per 1,000 Births, 1999-2008

Race/Ethnicity	Average Annual # with Birth Defects	Average Annual Live Births	Crude Rate/1,000 Live Births *(95% CI Range)*	Sig.*
All Utah Infants	1,153	50,678	22.6 (*22.2- 23.1*)	n/a
American Indian/Alaska Native	14	647	21.5 (*18.1- 25.4*)	
Asian/Pacific Islander	29	1,554	18.7 (*16.6- 20.9*)	↓
Black or African American	10	382	24.9 (*20.1- 30.4*)	
White	939	40,395	23.2 (*22.8- 23.7*)	↑
Hispanic or Latino	151	7,367	20.5 (*18.9- 22.1*)	↓

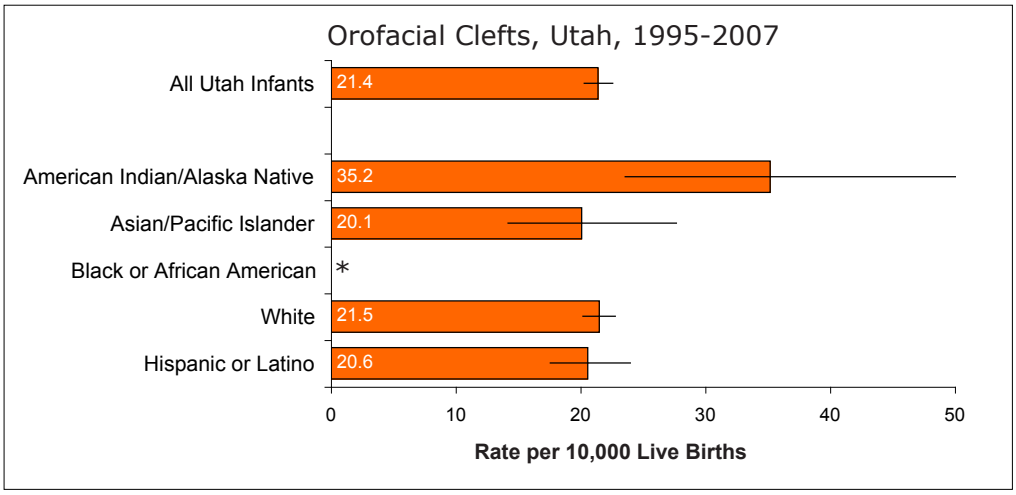
Source: Utah Birth Defect Network. Average Annual Live Births Data: Utah Birth Certificate Database.
*The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Note: Individuals were classified into only one racial/ethnic category.

Contact: UDOH Utah Birth Defect Network, 801-883-4661, http://health.utah.gov/birthdefect/

Orofacial Clefts

Why Is It Important?
Orofacial clefts (cleft lip and/or cleft palate) are among the most common birth defects. They can occur alone or in combination with other defects and can significantly affect a child's health and well being. Children with orofacial clefts require medical and surgical services to treat the structural malformations. Even after surgery, these children are at increased risk of illness and disability, particularly with respect to hearing and communication, and may require long-term health and rehabilitation services to improve outcomes and reduce complications.[82]



How Are We Doing?
- From 1995–2007, the rate of orofacial clefts in Utah was 21.4 per 10,000 births.
- American Indian/Alaska Native Utah infants had a significantly higher rate of orofacial clefts than all Utah infants.

How Can We Improve?
Utah has the highest rate of orofacial clefts in the U.S. To reduce the occurrence of orofacial clefts among infants in Utah, primary prevention activities must be targeted at women in their childbearing years who are not yet pregnant. Strategies for reducing the risk of orofacial clefts need to begin before a woman becomes pregnant. These strategies include taking a daily multivitamin with folic acid prior to pregnancy, maintaining a healthy pre-pregnancy weight, eating a healthy diet, controlling blood sugar if diabetic, and not smoking cigarettes and drinking alcohol. Women planning a pregnancy should always consult their obstetric care provider about any medications they may be taking or chronic diseases (e.g., diabetes) they may have. More research is needed to determine how to prevent birth defects. The UDOH, Utah Birth Defect Network (UBDN) tracks all major birth defects to search for causes and promotes birth defect prevention such as using a multivitamin with folic acid before becoming pregnant to prevent spina bifida and other neural tube defects.

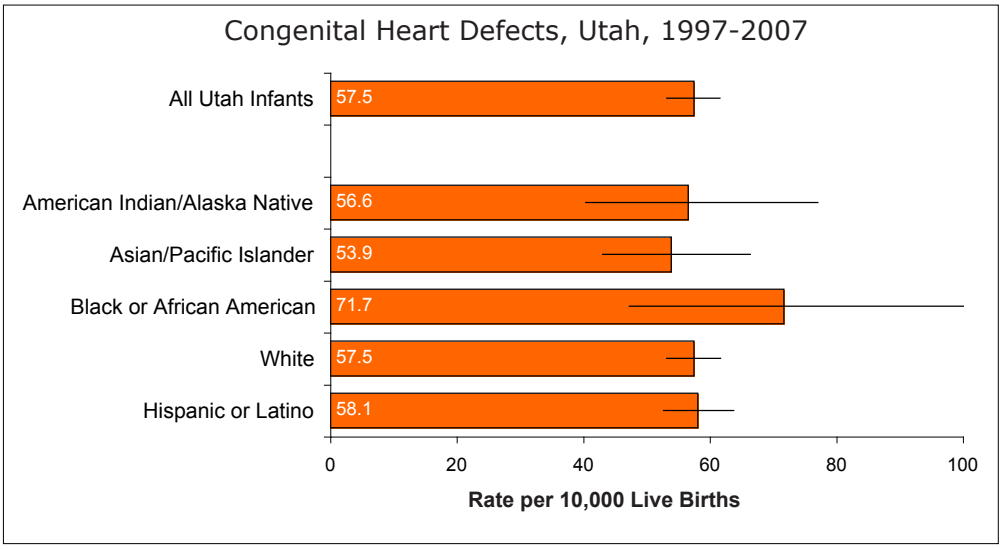
Utah Infants with Orofacial Clefts per 10,000 Births, 1995-2007

Race/Ethnicity	Average Annual # with Clefts	Average Annual Live Births	Crude Rate/10,000 Live Births *(95% CI Range)*	Sig.**
All Utah Infants	102	47,763	21.4 (*20.3- 22.6*)	n/a
American Indian/Alaska Native	2	634	35.2 (*23.6- 50.5*)	↑
Asian/Pacific Islander	3	1,415	20.1 (*14.2- 27.7*)	
Black or African American	*	326	* (* - *)	
White	83	38,904	21.5 (*20.2- 22.8*)	
Hispanic or Latino	13	6,191	20.6 (*17.6- 24.0*)	

Source: Utah Birth Defect Network. Average Annual Live Births Data: Utah Birth Certificate Database.
*Due to low numbers, this rate is unreliable and has been suppressed.
**The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.
Note: Individuals were classified into only one racial/ethnic category.

Congenital Heart Defects

Why Is It Important?
Congenital heart defects are the most common form of birth defects. Children with heart defects can be severely affected and can require complex surgical and medical treatment. Most children with complex heart defects survive to adulthood but continue to need special heart care throughout their lives.[85]



How Are We Doing?
- From 1997–2007, the rate of congenital heart defects in Utah was 57.5 per 10,000 births.
- There were no statistically significant differences in congenital heart defects by race and ethnicity.

How Can We Improve?
To reduce the occurrence of congenital heart defects among infants in Utah, primary prevention activities must be targeted at women in their childbearing years who are not yet pregnant. Strategies for reducing the risk of congenital heart defects need to begin before a woman becomes pregnant. These strategies include taking a daily multivitamin with folic acid prior to pregnancy, maintaining a healthy pre-pregnancy weight, eating a healthy diet, controlling blood sugar if diabetic, and not smoking cigarettes and drinking alcohol. Women planning a pregnancy should always consult their obstetric care provider about any medications they may be taking or chronic diseases (e.g., diabetes) they may have. Usually, the cause of a congenital heart defect is unknown.[85] More research is needed to determine how to identify modifiable risk factors in order to prevent congenital heart defects. The UDOH, Utah Birth Defect Network (UBDN) tracks all major birth defects to search for causes and promotes birth defect prevention such as using folic acid before becoming pregnant to prevent spina bifida and other neural tube defects.

Utah Infants with Congenital Heart Defects Per 10,000 Births, 1997-2007

Race/Ethnicity	Average Annual # with Heart Defects	Average Annual Live Births	Crude Rate/10,000 Live Births *(95% CI Range)*	Sig.*
All Utah Infants	282	49,028	57.5 (*53.2- 61.6*)	n/a
American Indian/Alaska Native	4	642	56.6 (*40.4- 77.1*)	
Asian/Pacific Islander	8	1,469	53.9 (*43.1- 66.4*)	
Black or African American	2	342	71.7 (*47.3- 104.3*)	
White	228	39,593	57.5 (*53.2- 61.7*)	
Hispanic or Latino	39	6,670	58.1 (*52.7- 63.8*)	

Source: Utah Birth Defect Network. Average Annual Live Births Data: Utah Birth Certificate Database.
*The rate for each race/ethnic population has been noted when it was significantly higher (↑) or lower (↓) than the state rate.

Note: Individuals were classified into only one racial/ethnic category.

Contact: UDOH Utah Birth Defect Network, 801-883-4661, http://health.utah.gov/birthdefect/